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## THE DIRECTOR OF CENTRAL INTELLIGENCE

WASHINGTON, D.C. 20505

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## National Intelligence Council

MEMORANDUM FOR: Chairman, National Intelligence Council

FROM: Maurice C. Ernst  
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SUBJECT: Some Perspectives on the Pipeline

1. The insistence on precise estimates of how much US sanctions could delay completion of the Yamal pipeline indicates a lack of perspective concerning Soviet capabilities and options in gas pipeline construction. Specific estimates of delays are feasible only when comparing technical options involving specific sources of equipment (for example, producing GE rotors in France instead of the United States). In practice Moscow is likely to use a variety of technical options and Western sources of equipment unless the latter are all shut off. This flexibility would presumably mean smaller delays than would occur if only one technical option were involved.

2. Even if Moscow had no access to Western compressors, there is no question that it would be able to make adjustments in domestic production and in its pipeline construction plans. Consider the following:

- o The USSR builds more long distance gas pipelines than the rest of the world put together; the Yamal line is only one of six planned for construction during 1981-85.

- o Although the Soviets have found their own compressors to be less satisfactory than some of those built in the West, their compressors do work and may be improving. Since 1978, most Soviet long distance lines have used Soviet-built 10 Megawatt compressors. The existing line to Western Europe uses Soviet as well as some Western compressors of this size.

- o Moscow has been developing a 25 Megawatt compressor. It hopes to get Western help, but does not lack technical capability. The USSR is among the world leaders in electric power generation and builds large numbers of effective and reliable, if not efficient, jet engines. There is every reason to believe that the Soviets could develop an adequate large compressor without Western help. It might take more maintenance and use more fuel, but that is characteristic of most Soviet equipment.

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o The GE compressors on which so much is being written are characterized as including "1950's technology." What the Soviets like is their proven track record and reliability, but that doesn't mean something else won't do.

3. Even if they have to go it alone, the Soviets almost certainly will build pipelines to expand gas exports to Western Europe. They realize they badly need the hard currency. If they build the Yamal pipeline with their own compressors, there would be greater gas consumption to run the pipeline, and therefore slightly smaller gas sales to Western Europe. The foregone earnings, however, are not massive except when cumulated over many years. Completion of such a pipeline need not be delayed if Moscow gives it a very high priority. Some domestic pipelines might be delayed, but perhaps not much since it seems reasonable to expect domestic compressor production to be accelerated beyond planned level.

4. Even if there were substantial delays, Moscow could partially bridge the gap using new domestic pipelines for most of the distance to Western markets.

5. If Moscow could not buy Western compressors, it would still be dependent on Western suppliers for a great deal of pipe. However, France and Italy, which are large potential suppliers of compressors but not pipe, might find buying Soviet gas less attractive. The principal potential attraction of Soviet gas for these countries would then shift from larger export sales to low gas prices. There is little question that Soviet gas is potentially the cheapest source of large amounts of new gas for Western Europe. The cost of producing and transporting Algerian gas is probably less, but Algerian reserves are far smaller than Soviet reserves. Norway has the reserves to supply substantial amounts of new gas in the 1990s, but I suspect that much of the new Norwegian gas would be more expensive to transport than Soviet gas. Consequently, if the West Europeans want to ensure long term supplies of gas at prices low enough to compete with oil in widespread industrial uses, they probably must go to the Soviet Union. This key selling point for Soviet gas will remain even if there are no tied exports of equipment. Even so, French and Italian government enthusiasm for the pipeline might weaken considerably, especially in the face of political criticism.



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